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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/821,343 | 04/09/2004 | Robert Wayne Shearin | 502609 | 9995 |
| 23460 | 7590 | 02/22/2006 | EXAMINER | |
| LEYDIG VOIT & MAYER, LTD TWO PRUDENTIAL PLAZA, SUITE 4900 180 NORTH STETSON AVENUE CHICAGO, IL 60601-6780 | | | | GOFF II, JOHN L |
| ART UNIT | | PAPER NUMBER | | |
| | | 1733 | | |

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/821,343 | SHEARIN ET AL. | |
| | Examiner | Art Unit | |
| | John L. Goff | 1733 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 09 April 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-10 is/are rejected.
- 7) Claim(s) 11 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 09 April 2004 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/26/04.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

1. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because of the objections by the Draftsperson (See the included PTO-948). Applicant is advised to employ the services of a competent patent draftsperson outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kershaw (U.S. Patent 3,938,973) in view of Evans (U.S. Patent 4,210,067).

Kershaw discloses a method of making a filter comprising providing a partially assembled filter assembly including a frame and a filter medium wherein the side edges of the filter medium are inserted into a hot melt adhesive coated channel of the frame, advancing the filter assembly by conveyor to a heating press including a heating die, engaging the heated die with the frame of the filter assembly under pressure for a time period for heating the frame to melt the hot melt adhesive, advancing the filter assembly by conveyor to a cold sealing press including a cooling die, engaging the cooling die with the frame of the filter assembly under pressure for a time period for cooling the hot melt adhesive and bonding the edges of the filter medium with the frame to form a sealed filter (Figures 3 and 9 and Column 4, lines 66-68 and Column 5, lines 1-2, 21-24, and 52-58 and Column 6, lines 3-26). Kershaw does not specifically teach the final step of "mechanically transferring the sealed filter to an ejection station for removal thereof", it being noted there is intrinsically an ejection station for removing the filter from the process in Kershaw, and because the filter assembly is mechanically advanced into the cold sealing press it would appear this is also how the sealed filter is removed from the cold sealing press such that the claim limitation is met. In any event, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include in Kershaw the well known filter ejection method of mechanically advancing the sealed filter along a conveyor from the sealing station to an ejection station as shown for example by Evans as only the expected results of removing the sealed filter from the process would be achieved.

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Regarding claims 3 and 4, Kershaw does not specifically note the time period for pressing the filter assembly with the heating press. However, Kershaw teaches the filter assembly is pressed in the heating press for a time sufficient to melt the hot melt adhesive (Column 6, lines 11-19) such that it would have been obvious to one of ordinary skill in the art at the time the invention was made to experimentally determine the time period for pressing the filter assembly with the heating press as a function of the amount of time required to melt the hot melt adhesive as doing so would have required nothing more than ordinary skill and routine experimentation.

Evans discloses a method of making a filter comprising providing a filter assembly including a frame and a filter medium wherein the filter medium is conveyed through various sealing stations for bonding side edges of the filter medium into an adhesive coated channel of the frame, and following the final sealing station the sealed filter is conveyed to an ejection station for removing the sealed filter from the process (Figure 1 and Column 1, lines 48-51 and 63-65 and Column 2, lines 27-32).

5. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kershaw and Evans as applied to claims 1-4 above, and further in view of Giovannone (U.S. Patent 5,379,572).

Kershaw and Evans as applied above teach all of the limitations in claims 5-8 except for a specific teaching of the heating press and cold sealing press including movable upper and lower dies. Kershaw teaches the heating press and cold sealing press include upper and lower heating or cooling dies wherein the upper die is movable (Figure 9). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use in Kershaw as modified by

Evans a movable lower heating or cooling die such that heat and cooling are applied in the presses to the upper and lower surfaces of the filter assembly an equal amount of time as was well known in the art of edge sealing and shown for example by Giovannone.

Giovannone is exemplary of edge sealing using a heating press and a cold sealing press wherein the presses include movable upper and lower dies (the Figure and Column 3, lines 4-8).

Regarding claim 6, Kershaw does not specifically note the pressure applied to the filter assembly by the heating press. However, Kershaw teaches the filter assembly is pressed in the heating press at a pressure sufficient to melt and distribute the hot melt adhesive (Column 6, lines 11-19) such that it would have been obvious to one of ordinary skill in the art at the time the invention was made to experimentally determine the pressure required for pressing the filter assembly with the heating press as a function of the amount of pressure required to melt and distribute the hot melt adhesive as doing so would have required nothing more than ordinary skill and routine experimentation.

Regarding claim 8, Kershaw does not specifically note the time period for pressing the filter assembly with the cold sealing press. However, Kershaw teaches the filter assembly is pressed in the cold sealing press for a time sufficient to cool the hot melt adhesive and bond the edges of the filter medium with the frame to form a sealed filter (Column 6, lines 23-26) such that it would have been obvious to one of ordinary skill in the art at the time the invention was made to experimentally determine the time period for pressing the filter assembly with the cold sealing press as a function of the amount of time required to cool the hot melt adhesive and bond the edges of the filter medium with the frame to form a sealed filter as doing so would have required nothing more than ordinary skill and routine experimentation.

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kershaw and Evans as applied to claims 1-4 above, and further in view of Jackson (U.S. Patent 3,747,773).

Kershaw and Evans as applied above teach all of the limitations in claim 9 except for a specific teaching of using ethylene vinyl acetate as the hot melt adhesive, it being noted Kershaw is not limited to any particular hot melt. Absent any unexpected results, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the hot melt adhesive in Kershaw as modified by Evans those well known and conventional in the art for bonding a filter medium to a frame such as ethylene vinyl acetate as shown for example by Jackson.

Jackson is exemplary of bonding a filter medium to a frame using a hot melt adhesive such as ethylene vinyl acetate (Figure 1 and Column 3, lines 19-26).

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kershaw and Evans as applied to claims 1-4 above, and further in view of Fausset (U.S. Patent 2,856,054).

Kershaw and Evans as applied above teach all of the limitations in claim 10 except for a teaching of the specific conveyor for advancing the filter assembly. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the conveyor in Kershaw as modified by Evans a well known endless loop conveyor including transport plates such as that shown by Fausset for advancing the filter assembly wherein while one transport plate is suspended at a station for working on a filter assembly, e.g. the heating press station, the other transport plates continue to advance additional filter assemblies to the other work stations without changing the speed of the conveyor.

Fausset discloses an endless loop conveyor including transport plates for advancing an article through a plurality of work stations, e.g. pressing stations, wherein work is performed at each of the work stations on the articles advanced by the transport plates by suspending the transport plates at the work stations without ever changing the speed of travel of the chain conveyor (Column 1, lines 15-44 and Column 2, lines 53-62).

Allowable Subject Matter

8. Claim 11 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:
The prior art of record fails to teach or suggest the claimed method for making a filter wherein a filter assembly is advanced sequentially through a heating press, cold sealing press, and ejection station on a transfer plate, the transport plate including an opening for receiving the filter assembly and holding tabs protruding inward from the edges of the opening for holding the frame of the filter assembly.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is **(571) 272-1216**. The examiner can normally be reached on M-F (7:15 AM - 3:45 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John L. Goff